

KCC 4844 (K-C 16,629)
PATENT

REMARKS/ARGUMENTS

Claims 10, 11, 18-20, 25-27, and 34-36 are canceled, claims 1, 12-15, 21, and 28-31 are amended, and new claims 62 and 63 are added herein. Claims 39 and 42-61 were previously withdrawn from consideration and claims 37, 40, and 41 were previously canceled. Claims 1-9, 12-17, 21-24, 28-33, and 38 will be pending for consideration upon entry of this amendment.

The following remarks are responsive to the Office action dated April 24, 2004.

Applicants note that claims 10 and 26 were indicated in the action as being allowable if rewritten in independent form. New claims 62 and 63 correspond respectively to claims 10 and 26 written in independent form. Thus, claims 62 and 63 are submitted to be in proper form for allowance.

I. Response to Objection of Claims

The redundant recitation of claim 9 was inadvertently added to the Listing of Claims in applicants' Amendment B and has been deleted from the Listing of Claims submitted herein. Applicants note that the duplicate submission of claim 9 in Amendment B was done so in error and was not an amendment to original claim 8.

II. Response to Rejection of Claims

Claim 1

Claim 1 as amended herein is directed to a pattern-unbonded nonwoven fabric that comprises, inter alia:

a nonwoven web having a fibrous structure of individual fibers or filaments;

KCC 4844 (K-C 16,629)
PATENT

the nonwoven web having on a surface thereof a pattern of continuous bonded areas defining a first plurality of discrete unbonded areas and a second plurality of discrete unbonded areas;

the first plurality of discrete unbonded areas having a first characteristic; and

the second plurality of discrete unbonded areas having a second characteristic different from the first characteristic, the first characteristic being a first tensile strength and the second characteristic being a second tensile strength, the second tensile strength being greater than the first tensile strength.

Claim 1 is submitted to be non-obvious and patentable over the references of record, and in particular U.S. Patent No. 5,858,515 (Stokes et al.) in view of WO 99/27879 (Roxendal et al.), in that whether considered alone or in combination the references fail to show or suggest a pattern unbonded nonwoven fabric having on a surface thereof a pattern of continuous bonded areas defining a first plurality of discrete unbonded areas and a second plurality of discrete unbonded areas wherein the second discrete unbonded area has a second characteristic that is different from a first characteristic of the first plurality of discrete unbonded areas, with the first characteristic being a first tensile strength and the second characteristic being a second tensile strength, and the second tensile strength being greater than the first tensile strength.

As described at page 3 of the present application starting at line 25, Stokes et al. disclose a pattern-unbonded nonwoven fabric (4) having continuous bonded areas (6) defining discrete

KCC 4844 (K-C 16,629)
PATENT

unbonded areas (8). Stokes et al. lack any disclosure or even a suggestion to form first and second regions of continuous unbonded areas wherein the regions have different characteristics as recited in claim 1 of the present application. For example, the process disclosed in Stokes et al. for making the fabric involves the use of a heated pattern roll (42) having openings (48) formed therein uniformly across the length of the roll and all of the same size. Consequently, there are no differing characteristics at all between any two regions of the fabric disclosed in Stokes et al, let alone differing tensile strengths. Rather, the teachings of Stokes et al. are limited to a fabric having discrete unbonded areas that are uniform throughout.

Roxendal et al. disclose an absorbent article in which an acquisition layer of continuous fibers comprises at least two zones which are different with respect to one or more properties that effect fluid flow, such as basis weight, density, pore size, hydrophilicity/hydrophobicity, fiber type, and bonding pattern. The fibers of the continuous layer are bonded together in points, lines or spots in a bonding pattern, but are otherwise unbonded to each other. As shown in Figs. 1, 3, and 4 of Roxendal et al., the bonded areas of the layer are not continuous bonded areas. Consequently, Roxendal et al. fail to disclose or suggest a plurality of discrete unbonded areas as recited in claim 1.

The purpose of providing the two zones having different properties is to improve fluid flow, such as absorption and fluid distribution. There is no disclosure found anywhere in Roxendal et al. of providing two regions of different bonding patterns that result in the second region having a higher

KCC 4844 (K-C 16,629)
PATENT

tensile strength than the first region. In fact, such a property has no bearing on the fluid flow.

In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification. Obviousness can only be established by modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references or in the knowledge generally available to one of ordinary skill in the art. MPEP § 2143.01 citing In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). The mere fact that a prior art reference may be modified to obtain the claimed invention does not make the claimed invention obvious if there is no suggestion or motivation in the reference to make the modification. In re Mills, 916 F.2d 680, 682, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990). The prior art must provide one of ordinary skill the motivation to make the proposed modifications. In re Lalu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984). Such motivation is clearly lacking in this case.

One of ordinary skill in the art would not have any motivation to combine Stokes et al. with Roxendal et al. to vary the bonding patterns between first and second regions such that the second region has a higher tensile strength than the first region. That is, as noted previously, the parameter variations described in Roxendal et al., including the basis weight, density, fiber type, bonding pattern, etc. are all directed to fluid flow control and not to tensile strength. There is no suggestion made in Roxendal et al. (or Stokes et

KCC 4844 (K-C 16,629)
PATENT

al.) that would motivate one skilled in the art to modify the bond patterns of Stokes et al. so as to vary the tensile strength of the nonwoven fabric disclosed by Stokes et al. At page 4, second full paragraph of the Office action, the Office takes the position that providing different bonding patterns inherently provides different tensile strengths. Applicant respectfully disagrees. To establish inherency, the prior art "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999); MPEP §2112.

The acquisition layer disclosed by Roxendal et al. does not necessarily have the tensile strength differential recited in amended claim 1 of the present application. Roxendal et al. disclose a various number of construction parameters (e.g., density, basis weight, fiber type, hydrophilicity/hydrophobicity, bonding pattern) which are each intended to effect fluid flow characteristics of the acquisition layer, not the tensile strength characteristics. There is no certainty that the tensile strength characteristics recited in amended claim 1 necessarily result from the various parameter constructions disclosed by Roxendal et al., even if such a result may be possible.

While the present application discloses providing discrete unbonded regions that provide different tensile strength characteristics, such a result is not a certainty based on the

KCC 4844 (K-C 16,629)
PATENT

limited bonding pattern disclosure made by Roxendal et al. For example, it is possible that the bond patterns of two regions may be different and yet the tensile strengths of the regions are the same (e.g., due to other parameters, or due to the different sizes, shapes, etc. of the bonded and unbonded areas). Thus, it is submitted that the disclosure by Roxendal et al. of varying the bonding pattern (among other parameters) to effect fluid flow does not inherently result in varying the tensile strength characteristics as recited in amended claim 1.

For these reasons, claim 1 is submitted to be non-obvious and patentable over the references of record.

Claims 2-9, 12-14, and 38 depend directly or indirectly from claim 1 and are submitted to be patentable over the references of record for the same reasons as claim 1.

Claim 15

Amended claim 15 is directed to a pattern-unbonded nonwoven fabric comprises, *inter alia*:

- a nonwoven web having a fibrous structure of individual fibers or filaments;

- the nonwoven web having on a surface thereof a pattern of continuous bonded areas defining a first plurality of discrete unbonded areas and a second plurality of discrete unbonded areas;

- the first plurality of discrete unbonded areas having a first characteristic; and

- the second plurality of discrete unbonded areas having a second characteristic different from the first characteristic, the first characteristic being a first stiffness, and the second characteristic being a second stiffness.

KCC 4844 (K-C 16,629)
PATENT

Claim 15 is submitted to be nonobvious and patentable over the references of record, and in particular, Stokes et al. in view of Roxendal et al., for reasons substantially similar to those discussed above in connection with claim 1. That is, neither Roxendal et al. nor Stokes et al. provide any teaching or suggestion for a pattern unbonded nonwoven fabric having on a surface thereof a pattern of continuous bonded areas defining a first plurality of discrete unbonded areas and a second plurality of discrete unbonded areas wherein the second discrete unbonded area has a second characteristic that is different from a first characteristic of the first plurality of discrete unbonded areas, with the first characteristic being a first stiffness and the second characteristic being a second stiffness.

One of ordinary skill in the art would not have any motivation to combine Stokes et al. with Roxendal et al. to vary the bonding patterns between first and second regions such that the second region has a different stiffness than the first region. That is, as noted previously, the parameter variations described in Roxendal et al. (basis weight, density, fiber type, bonding pattern, etc.) are all directed to fluid flow control and not to stiffness. There is no suggestion made in Roxendal et al. (or Stokes et al.) that would motivate one skilled in the art to modify the bond patterns of Stokes et al. so as to vary the stiffness of the nonwoven fabric disclosed by Stokes et al.

At page 4, second full paragraph of the Office action, the Office takes the position that providing different bonding patterns inherently provides different stiffness. Applicant respectfully disagrees since there is no certainty that the

KCC 4844 (K-C 16,629)
PATENT

stiffness characteristics recited in amended claim 1 necessarily result from the various parameter constructions disclosed by Roxendal et al., even if such a result may be possible.

While the present application discloses providing discrete unbonded regions that provide different stiffnesses, such a result is not a certainty based on the limited bonding pattern disclosure made by Roxendal et al. For example, it is possible that the bond patterns of two regions may be different and yet the stiffnesses of the regions are the same (e.g., due to other parameters, or due to the different sizes, shapes, etc. of the bonded and unbonded areas). Thus, it is submitted that the disclosure by Roxendal et al. of varying the bonding pattern (among other parameters) to effect fluid flow does not inherently result in varying the stiffness characteristics as recited in amended claim 15.

Claims 16-17 depend directly or indirectly from claim 15 and are submitted to be patentable over the references of record for the same reasons as claim 15.

Claim 21

Claim 21 is directed to a pattern-unbonded non-woven web that comprises, *inter alia*:

a first region including a first pattern of continuous bonded areas defining a first plurality of discrete unbonded areas;

at least one second region including a second pattern of continuous bonded areas defining a second plurality of discrete unbonded areas, the second pattern being different from the first pattern;

KCC 4844 (K-C 16,629)
PATENT

the first pattern having a first characteristic; and,
the second pattern having a second characteristic
different from said first characteristic, the first
characteristic being a first tensile strength and the second
characteristic being a second tensile strength, the second
tensile strength being greater than the first tensile strength.

As mentioned above with respect to claim 1, neither
Roxendal et al. nor Stokes et al. disclose or otherwise even
suggest (explicitly or inherently) regions of discrete unbonded
regions areas that provide different tensile strength
characteristics. Thus, a combination of these references would
similarly fail to show or suggest such a feature.

Claims 22-24 and 28-30 depend directly or indirectly from
claim 21 and are submitted to be patentable over the references
of record for the same reasons as claim 21.

Claim 31

Claim 31 is directed to a pattern-unbonded non-woven web that
comprises, *inter alia*:

a first region including a first pattern of continuous
bonded areas defining a first plurality of discrete unbonded
areas;

at least one second region including a second pattern of
continuous bonded areas defining a second plurality of discrete
unbonded areas, the second pattern being different from the
first pattern;

the first pattern having a first characteristic; and,
the second pattern having a second characteristic
different from said first characteristic, the first

KCC 4844 (K-C 16,629)
PATENT

characteristic being a first stiffness and the second characteristic being a second stiffness.

As mentioned above with respect to claim 15, neither Roxendal et al. nor Stokes et al. disclose or otherwise even suggest (explicitly or inherently) regions of discrete unbonded areas that provide different stiffness characteristics. Thus, a combination of these references would similarly fail to show or suggest such a feature.

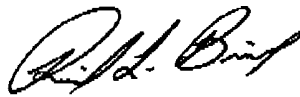
Claims 32 and 33 depend directly or indirectly from claim 31 and are submitted to be patentable over the references of record for the same reasons as claim 31.

KCC 4844 (K-C 16,629)
PATENT

III. Conclusion

In view of the foregoing, reconsideration and allowance of claims 1-9, 12-17, 21-24, 28-33, and 38 is respectfully requested. The Commissioner is hereby authorized to charge any fee deficiency in connection with this Amendment C to Deposit Account Number 19-1345 in the name of Senniger Powers.

Respectfully submitted,



Richard L. Bridge, Reg. No. 40.529
SENNIGER, POWERS, LEAVITT & ROEDEL
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

RLB/PEB/tmg

VIA FACSIMILE 703-972-9306